

REMARKS

Claim Rejections

Status of Claims

Upon entry of the foregoing amendments, claims 1-20 (20 total claims, 2 independent claims) remain pending in this application. Applicants respectfully request reconsideration and allowance of the pending claims in view of the following remarks.

Double Patenting—Claims 6 and 7

The Office Action asserts that should claim 6 be found allowable, claim 7 will be objected to under 37 C.F.R. § 1.75 as being a substantial duplicate thereof. The Office Action further asserts that the “above claims differ only in their manner or method of intended use.” Applicants respectfully traverse this rejection.

Applicants contend that claim 7 contains an element that further restricts claim 6. Specifically, claim 7 requires maintaining the copper-containing solution entering the electrowinning circuit at a level of about 40 grams/liter. Therefore, Applicant respectfully request the withdrawal of any possible objection to claim 7 should claim 6 be allowed.

Double Patenting—Claims 8, 9 and 19

The Office Action asserts that should claim 8 be found allowable, claims 9 and 19 will be objected to under 37 C.F.R. § 1.75 as being a substantial duplicate thereof. The Office Action further asserts that the “above claims differ only in their manner or method of intended use.” Applicants respectfully traverse this rejection.

Applicants contend that claim 9 contains an element that further restricts claim 8. Specifically, claim 9 requires blending to achieve a copper-containing solution having a copper concentration of about 20 to about 75 grams/liter. Therefore, Applicant respectfully request the withdrawal of any possible objection to claim 9 should Claim 8 be allowed.

In addition, Applicants note that claim 19 has been amended to be dependent from claim 13 and therefore, Applicants contend that any possible objections should be withdrawn.

Rejections Under 35 U.S.C. § 102

In the Office Action, claims 1-10 and 13-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Fisher et al. (U.S. Patent No. 3,917,519). In particular, the Office Action contends that Fisher teaches a system for recovering copper from a copper containing material, comprising a reactor, or reactor means (a slurry tank) suitable for reacting a copper feed stream with a portion of a copper containing lean electrolyte stream through a recycling means, a pressure leaching vessel, or leaching means leading to a means for conditioning the product slurry comprising a liquid-solid separation circuit which can include a "blending" means. The Office Action contends that the system then comprises an electrowinning circuit or means which recycles the copper containing lean electrolyte to the reactor. The Office Action contends that all aspects of the claimed invention are thereby shown. Applicants respectfully traverse the § 102(b) rejections for claims 1-10 and 13-19.

Applicants note that claim 1 recites a system for recovering copper from a copper-containing material comprising a reactor "suitable for reacting at least a portion of a copper-containing feed stream with at least a portion of a copper-containing lean electrolyte stream in an acidic environment...." In addition, Applicants note that claim 13 similarly recites a system with "means for reacting a copper-containing material stream with a copper-containing lean electrolyte stream...." While the Office Action states that recycling means (22) of Fisher is a copper containing lean electrolyte stream, Applicants respectfully disagree.

Fisher shows a lean electrolyte stream (19) leaving the electrolytic deposition process. This stream, however, is treated with a sulfiding agent to precipitate the copper as copper sulfide. (See col. 5, l. 2-3). The slurry that is produced in this process is then sent to a thickener to produce a thickened acidic copper sulfide slurry. (See col. 5, l. 14-19). In addition, Fisher teaches that between 70-90% of the electrolyte stream can be bled from the process. (See col. 5, l. 19-21). In sum, the lean electrolyte stream that exits the electrolytic deposition process must undergo further conditioning/reaction before it is able to be used in the reactor shown in Fisher, and thus, the reactor in Fisher has an acidic copper slurry input as opposed to a lean electrolyte input. Therefore, Fisher does not teach a system that comprises a reactor or means for reacting a copper-containing feed stream with at least a portion of a copper-containing lean electrolyte stream, as required by Applicants' claims 1 and 13. Accordingly, since each and every element

of claims 1 and 13 are not taught, Applicants respectfully request the withdrawal of all § 102(b) rejections of claims 1 and 13, and all claims respectively dependent therefrom.

Claim 4 of the present invention claims a system comprising a reactor suitable for reacting a copper-containing feed stream and a copper-containing lean electrolyte stream in the "presence of sulfur dioxide," whereby copper is precipitated as copper sulfide. Similarly, claim 16 requires a presence of sulfur dioxide and a precipitation of copper sulfate in reacting means. Fisher, however, does not teach or even suggest the use of sulfur dioxide in the reactor (slurry tank depicted in Figure 1). As shown in the Figure, the only elements converging on the slurry tank are an ore concentrate (1), an acid slurry of copper sulfide (22), and wash water (16). In addition, there is no mention in the description of the slurry tank of any copper sulfide precipitation. Therefore, Fisher does not teach or suggest each and every element of either claim 4 or claim 16. Accordingly, Applicants respectfully request the withdrawal of all § 102(b) rejections of claims 4 and 16.

Claim 7 of the present invention requires that the "copper concentration of said copper-containing solution entering said electrowinning circuit is maintained at a level of about 40 grams/liter." Claim 18 has a similar requirement. As demonstrated in Table 1 of Fisher, the copper concentration of stream 12 — the stream entering the electrolytic deposition process — is 75.1 grams per liter. As shown above, Fisher does not teach or suggest each and every element of either claim 7 or claim 18. Accordingly, Applicants respectfully request the withdrawal of all § 102(b) rejections of claims 7 and 18.

Claim 10 of the present invention requires that the system also comprise a "means for recycling at least a portion of said copper-containing lean electrolyte stream from said electrowinning circuit to said reactor." As demonstrated above, in Fisher, a portion of the lean electrolyte stream (19) that exits the electrolytic deposition process is treated and reacted before the resulting stream is thickened and sent to the reactor (slurry tank). Therefore, because the lean electrolyte stream is not recycled to the reactor, but is instead used to precipitate out the copper, each and every element of claim 10 is not taught by Fisher. Accordingly, Applicants respectfully request the withdrawal of all § 102(b) rejections of claim 10.

In sum, in total, Fisher does not teach each and every element of independent claims 1 and 13, or claims 2-12 and 14-20 respectively dependent therefrom. Applicant therefore respectfully requests the withdrawal of all § 102(b) rejections for claims 1-20.

In addition, Examiner states that claims 11, 12 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Applicants contend, in view of the foregoing remarks, that claims 1, 8 and 13 are allowable as pending and, therefore, requests the withdrawal of objections to claims 11, 12, and 20.

CONCLUSION

In view of the foregoing, Applicants respectfully submit that all of the pending claims are allowable over the prior art of record. Reconsideration of the application and allowance of all pending claims are earnestly solicited. Should the Examiner wish to discuss any of the above in greater detail or deem that amendments should be made to improve the form of the claims, the Examiner is invited to telephone the undersigned at the Examiner's convenience.

Moreover, Applicants authorize and respectfully request that any fees due be charged to Deposit Account No. 19-2814. This statement does NOT authorize charge of the issue fee.

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Respectfully submitted,

By: 

Wendy S. Neal
Reg. No. 45,515

SNELL & WILMER L.L.P.
400 East Van Buren
One Arizona Center
Phoenix, Arizona 85004-2202
Telephone: (602) 382-6334
Facsimile: (602) 382-6070